

CLAIMS

What is claimed is:

1. A switch for controlling a range of movement comprising:
 - a plate securing a first electrolinking point and a second electrolinking point which are spaced apart;
 - a rotatable block having a first member;
 - a spring plate fixed to the plate, a first end of the spring plate being fixed to the first electrolinking point, the spring plate forming a second member engageable with the first member of the rotatable block and a second end of the spring plate being capable of adopting a first working position and a second working position with respect to the second electrolinking point,wherein in the first working position, the second end of the spring plate is in contact with the second electrolinking point and in the second working position, the second end of the spring plate is out of contact with the second electrolinking point, wherein during rotation of the rotatable block, when the second member of the spring plate moves out of contact with the first member of the rotatable block, the second end of the spring plate changes from the first working position to the second working position and when the second member of the spring plate moves into contact with the first member, the second end of the spring plate changes from the second working position to the first working position.
2. The switch as claimed in claim 1, wherein the first member of the rotatable block is a depressed cutout and the second member of the spring plate is a projection substantially conforming with the depressed cutout so that during rotation of the rotatable block, when the projection engages the depressed cutout, the second end of the spring plate contacts the

second electrolinking point, and when the projection disengages the depressed cutout, the second end of the spring plate disconnects from the second electrolinking point.

3. The switch as claimed in claim 1, wherein a rotatable shaft is fixedly connected to the rotatable block.

4. The switch as claimed in claim 3, wherein the plate is a worm wheel which is engaged with a worm gear rotationally supported on the base, and wherein the rotatable shaft is rotationally supported on the base.

5. The switch as claimed in claim 1, wherein the plate comprises an upper worm wheel and a lower worm wheel disposed coaxially with the upper worm wheel, the upper and the lower worm wheels respectively engaging an upper worm gear rotationally supported on the base and a lower worm gear rotationally supported on the base.

6. A garage door opener for driving a garage door between an open and a closed position comprising:

- a motor for driving the garage door between the open and the closed position;

- a drive mechanism responsive to the driving of the garage door;

- a switch comprising:

- a plate securing in spaced apart relationship a first electrolinking point and a second electrolinking point, said plate including a spring plate which comprises a first end, a middle portion and a second end;

- a rotatable block rotationally supported relative to the plate, wherein the rotatable block has a projection or hollow; and

a rotatable shaft rotationally driven by the drive mechanism during driving of the garage door, wherein the rotatable shaft is fixed to the rotatable block,

wherein the first end of the spring plate is fixed to the first electrolinking point, the middle portion of the spring plate abuts the rotatable block and during rotation of the rotatable block when the middle portion of the spring plate moves out of contact with the radial projection or hollow, the second end of the spring plate moves out of contact with the second electrolinking point and when the middle portion of the spring plate moves into contact with the radial projection or hollow, the second end of the spring plate moves into contact with the second electrolinking point,

wherein in use when the second end of the spring plate moves into contact with the second electrolinking point, the driving of the garage door is ceased.

7. A switch for controlling range of movement, comprising:

a plate having a first electrolinking point and a second electrolinking point;

a spring plate fixed to the plate, the spring plate forming a first member and a first end of the spring plate fixed to the first electrolinking point and a second end of the spring plate is capable of adopting a first working position and a second working position with respect to the second electrolinking point;

a rotatable block rotatable relative to the plate and forming a second member engageable with the first member of the spring plate; and

a rotatable device engaged with the plate to make the plate rotate relative to the block,

wherein in the first working position, the second end of the spring plate is in contact with the second electrolinking point and in the second working position, the second end of the spring plate is out of contact with the second electrolinking point, wherein during rotation of the rotatable block, when the second member of the spring plate moves out of contact with the first member of the rotatable block, the second end of the spring plate changes from the first working position to the second working position, and when the second member of the spring plate moves into contact with the first member, the second end of the spring plate changes from the second working position to the first working position.

8. The switch as claimed in claim 7, wherein the first member of the rotatable block is a depressed cutout and the second member of the spring plate is a projection substantially conforming with the depressed cutout so that during rotation of the rotatable block, when the projection engages the depressed cutout, the second end of the spring plate contacts the second electrolinking point, and when the projection disengages the depressed cutout, the second end of the spring plate disconnects from the second electrolinking point.

9. The switch as claimed in claim 7, wherein a rotatable shaft is fixedly connected to the rotatable block and rotationally supported on the base.

10. The switch as claimed in claim 7, wherein the rotatable device includes an upper worm gear and a lower worm gear both rotationally supported on the base.

11. The switch as claimed in claim 10, wherein the plate comprises an upper worm wheel and a lower worm wheel disposed coaxially with the upper worm wheel, the upper and the lower worm wheels respectively engaging an upper worm gear and a lower worm gear of the rotatable device.